ABSTRACT

[0087] A memory device and a method of forming the memory device. The memory device comprises a storage transistor at a surface of a substrate comprising a body portion between first and second source/drain regions, wherein the source/drain regions are regions of a first conductivity type. The storage transistor also comprises a gate structure that wraps at least partially around the body portion in at least two spatial planes. A bit line is connected to the first source/drain region and a word line connected to the gate structure. The memory device does not require an additional capacitive storage element.